National Pollutant Discharge Elimination System
Waste Discharge Permit WA-002496-1

State of Washington
ENERGY FACILITY SITE EVALUATION COUNCIL
Olympia, Washington 98504-3172

In compliance with the provisions of the:
State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington; and

State of Washington Energy Siting Law
Chapter 80.50 Revised Code of Washington; and

Federal Water Pollution Control Act
(Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

SATSOP COMBUSTION TURBINE PROJECT – PHASE I
Energy Northwest
P.O. Box 1223
Elma, Washington 98541-1223

Duke Energy Grays Harbor, LLC
P.O. Box 26
Satsop, Washington 98583

December 9, 2002

Facility Location: 401 Keys Road Elma, Washington. 98541 Industry Type: Electric Generating Plant (SIC 4911) Water Body I D No. WA-22-4040	Receiving Water: Outfall 001: Chehalis River at RM 19.7 Outfall 002B: Ground Water Discharge Locations: Outfall 001: Latitude: 46 58'19" N Longitude: 123 29'19" W Outfall 002B: Latitude: 46 58' 18" N Longitude: 123 28' 53" W

Energy Northwest/Duke Energy Grays Harbor, LLC is authorized to discharge in accordance with the special and general conditions that follow.

Date: _____

_____
Chairman, Energy Facility Site Evaluation Council

TABLE OF CONTENTS

Page

TABLE OF CONTENTS, CONT.

Page

List of Tables

SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Submittal	Frequency	First Submittal Date
S3.A	Outfall 001 Discharge Monitoring Report	Monthly	
S3.E	Noncompliance Notification	As necessary	
S3.F	Notice of Change in Authorization	As necessary	
S4	Operations and Maintenance Manual	Annually	Within 30 days of the effective date
S5.C	Updated Solid Waste Control Plan	1/permit cycle (every five years)	With application for permit renewal
S6.B	Spill Prevention Control and Countermeasure Plan	Every two years	Update due August 2003
S7	Priority Pollutant Scan	One time	Sample taken 180 days after commercial operation; report to follow
S8	Storm Water Pollution Prevention	1/permit cycle (every five years)	Within 60 days of the effective date
S9	Outfall Evaluation	One time	180 days prior to commercial operation
S10	C-1 Evaluation	One time	Within 30 days of the effective date
S11	Process Water Evaluation	One time	Within 120 days of the effective date
S12.A	Receiving Water Study – Sampling and QA Plan	One time	180 days after issuance of permit
S12.B	Receiving Water Study	One time	180 days after issuance of permit; report to follow
S12.C	Effluent Study	One time	After one year of commercial operation; report to follow
S12.D	Temperature Study	One time	Within one year of permit issuance; report to follow
S14	Acute Toxicity Testing	Quarterly for one year	Within 60 days of commercial operation, 60 days after each test completed; summary report 90 days after last test
S15	Chronic Toxicity Testing	Twice per year for one year	Within 60 days of commercial operation, 60 days after each test completed; summary report 90 days after last test
G9	Reporting a Cause for Modification	As necessary	At least 60 days prior to any proposed changes.
G10	Notice of Planned Changes	As necessary	
G11	Engineering Report for Construction or Modification Activities	As necessary	
G12	Reporting Anticipated Non-compliance	As necessary	
G22	Application for Permit Renewal	1/permit cycle (every five years)	180 days prior to expiration

SPECIAL CONDITIONS

S1. DISCHARGE LIMITATIONS

The permittee is authorized to discharge wastewater at the permitted locations subject to meeting the following limitations:

A. General

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit.

The discharge of any pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

The discharge of any pollutant not specifically authorized by this permit in concentrations that cause or contribute to a violation of water quality standards established under section 307(a) of the Clean Water Act or Chapter 173-201A WAC shall also be a violation of this permit and the Clean Water Act.

B. Circulating Cooling Water Blowdown Discharges – Outfall 001

Discharges of cooling water blowdown at the approximate location shown on the cover sheet are subject to compliance with the following effluent limitations:

Table 1: Effluent Limitations

Parameter	Daily Maximum	Monthly Average
Temperature [1]		
Total Residual Chlorine [2]	95 µg/L	47µg/L
Free Available Chlorine [2]	0.5 mg/L	0.2 mg/L
pH[3]	Between 6.5 and 8.5 [4]	----
Mercury	2.1 µg/L	0.012 µg/L
Cadmium[5]	0.47 µg/L	0.25 µg/L
Copper[5]	2.85 µg/L	2.24 µg/L
Chromium[5]	116 µg/L	37.6 µg/L
Lead[5]	7.79 µg/L	0.30 µg/L
Selenium	20 µg/L	5 µg/L

1 Temperature shall not exceed 16.0 °C.

2 Neither free available nor total residual chlorine may be discharged for more than two hours in any one day and not more than one unit may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Council that the units cannot operate at or below this level of chlorination.

3 Permittee shall include alarm systems for pH control to provide indication of any variance from established limits. If the continuous pH instrumentation malfunctions, grab samples taken every 6 to 10 hours shall be substituted.

4 The total time during which pH values are outside this range shall not exceed 7 hours and 26 minutes in any calendar month, and no individual excursion shall exceed 60 minutes. An excursion is an unintentional and temporary incident of pH exceedance. No excursions greater than 9.0 or lower than 6.0 are allowed.

5 Hardness data required to calculated effluent limit.

Table 1: Continued

Parameter	Daily Maximum	Monthly Average
Zinc[5]	22.9 µg/L	20.9 µg/L
Priority Pollutants and PCBs [6]	----	----
Total Suspended Solids	100.0 mg/L	30.0 mg/L
Flow	Note 7	Note 7

5 Hardness data required to calculated effluent limit.

6 There shall be no discharge of polychlorinated biphenyl compounds (PCBs). There shall be no detectable amount of priority pollutants (listed in 40 CFR Part 423, Appendix A) and PCBs in the effluent from chemicals added for cooling system maintenance.

7 Within 120 days of the effective date of this permit, the permittee shall submit process water and quench water flow data in association with special condition S11 for review by Ecology and Fish and Wildlife, and review and approval by the Council.

C. Oil/Water Separator Discharges – Outfall 001

Discharges of the oil/water separator through the cooling tower and inlet chiller tower to Outfall 001 at the approximate location shown on the cover sheet must comply with the effluent limitations listed above and are subject to compliance with the following additional effluent limitations:

Table 2: Effluent Limitations

Parameter	Daily Maximum	Monthly Average
Flow [1, 2]		
Oil and grease	20.0 mg/L	15.0 mg/L
Iron, total	1.0 mg/L	1.0 mg/L

1 Permittee shall mix effluent from this source with cooling tower blowdown when the cooling tower is operational. When the cooling tower is not operational, the discharge must be retained or a minimum dilution flow of 200 gpm from recirculated cooling waste inventory water.

2 The maximum amount of oil/water separator discharge must not cause an exceedance of the allowable daily maximum and monthly average flows.

D. Stormwater - Outfall 002B

Beginning on the effective date of this permit and lasting through the expiration date, Energy Northwest/Duke Energy Grays Harbor, LLC is authorized to discharge effluent from Outfall 002B into Pond C-1 subject to the following limitations and monitoring requirements:

Table 3: Stormwater Effluent Limitations

Parameter	Maximum Concentration
Total dissolved solids (mg/L)	500
Turbidity[1]	See footnote
Total Zinc (mg/L)	117

1 In the event of a spillover or breach of the stormwater system, discharge shall not cause turbidity to exceed 5 NTU over background turbidity when the background turbidity is 25 NTU or less, or have more than a 10% increase in turbidity when the background turbidity is more than 25 NTU. Background turbidity will be determined using surface water levels.

Table 3: Stormwater Effluent Limitations, Cont.

Parameter	Maximum Concentration
Copper (µg/L)	63.6
Iron (mg/L)	1.0
Oil and total petroleum hydrocarbons (mg/L)	15
Benzene [2] (µg/L)	1.0
pH	Between 6.0 and 8.5 at all times

2. Benzene, ethylbenzene, toluene, and total xylenes (BETX) are quantified as benzene.

S2. MONITORING REQUIREMENTS

A. Monitoring Schedule - Circulating Cooling Water Blowdown Discharges - Outfall 001

Beginning with the first discharge and lasting through the first year of operation, the permittee shall monitor the discharge of circulating cooling water blowdown to Outfall 001 as follows:

Table 4: Monitoring Schedule - Circulating Cooling Water Blowdown Discharge – Outfall 001

Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
pH		Blowdown	Continuous [1]	Meter
Total residual chlorine	mg/L	Circulating Water or Blowdown	Weekly	Grab
Free available chlorine	mg/L	Circulating Water or Blowdown	Continuous [2] or twice per treatment	Meter or Grab
Total suspended solids	mg/L	Blowdown	Weekly	Grab
Salinity as chloride	mg/L	Blowdown	Weekly	Grab
Hardness as $CaCO_3$	mg/L	Blowdown	Weekly	Grab
Ammonia, Total as N	mg/L	Blowdown	Weekly	Grab
Silver	µg/L	Blowdown	Weekly	Grab
Arsenic	µg/L	Blowdown	Weekly	Grab
Nickel	µg/L	Blowdown	Weekly	Grab
Mercury	µg/L	Blowdown	Weekly	Grab
Cadmium	µg/L	Blowdown	Weekly	Grab
Copper	µg/L	Blowdown	Weekly	Grab
Chromium	µg/L	Blowdown	Weekly	Grab
Lead	µg/L	Blowdown	Weekly	Grab
Selenium	µg/L	Blowdown	Weekly	Grab
Zinc	µg/L	Blowdown	Weekly	Grab
Flow	MGD	Blowdown	Continuous [1]	Meter

1 Continuous means uninterrupted - except for brief lengths of time for calibration, power failure, or for unanticipated equipment repair or maintenance. If monitoring equipment fails, permittee shall implement manual monitoring.

2 If the monitoring equipment malfunctions, grab samples taken every 4 hours shall be substituted. A grab sample shall be taken at least weekly to demonstrate continuous monitor performance.

Monitoring parameters and schedule will be modified subsequent to the submittal and approval of the studies required by special condition S12, Receiving Water Study.

B. Monitoring Schedule - Oil/Water Separator Discharges - Outfall 001

Beginning with the first discharge and lasting through the expiration date, the permittee shall monitor the discharge of oil/water separator discharges to through the cooling tower and inlet chiller tower Outfall 001 as follows:

Table 5: Monitoring Oil/Water Separator Discharges

Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Iron	mg/L	Blowdown	Weekly	24-hour composite
Oil and grease	mg/L	Blowdown	Weekly	24-hour composite

C. Monitoring Schedule - Cooling Water Blowdown Discharge - Outfall 001

Beginning with the first discharge and lasting through the expiration date, the permittee shall monitor cooling water blowdown discharge to Outfall 001 as follows:

Table 6: Monitoring Circulating Cooling Water Blowdown Discharge

Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Temperature	^{o}C	Raw Water Intake	Continuous [1]	Meter
Temperature	^{o}C	Blowdown – After Blending	Continuous [1]	Meter

1 Continuous means uninterrupted except for brief periods of time for calibration, power failure, or for unanticipated equipment repair or maintenance. If monitoring equipment fails, permittee shall implement manual monitoring.

D. Monitoring Schedule - Stormwater Discharges - Outfall 002B

Beginning on the effective date of this permit and lasting through the expiration date, unless the permittee submits an alternative plan as a modification of coverage and it is approved by EFSEC, the permittee shall monitor stormwater discharges to Outfall 002B. The permittee shall not allow any stormwater discharge water to reach surface waters of the state and shall monitor stormwater discharges to Outfall 002B as follows:

1. Sampling Requirements

Stormwater must be sampled according to the instructions below unless the permittee submits an alternative plan as a modification of coverage and it is approved by EFSEC. The permittee is not required to sample outside of regular business hours or during unsafe conditions. If a permittee is unable to sample during a monitoring quarter, they must submit an explanation with the monitoring report explaining why. Sampling of stormwater will be conducted as follows:

a. The permittee may take a single grab sample, a time-proportionate sample, or a flow proportionate sample. All grab samples will be taken within the first hour after

discharge begins. Time-proportionate and flow proportionate samples may be for a two hour period but must be started within the first 30 minutes after discharge begins.

b. All samples will be taken as close to the point of discharge as reasonably practical and can be achieved safely.

c. The storm event sampled must be at least 0.1 inches of rain in a 24-hour period.

d. The storm event sampled must be preceded by at least 24-hours of no measurable precipitation.

e. Sampling must be conducted to capture stormwater with the greatest exposure to significant sources of pollution. Each distinct point of discharge offsite must be sampled and analyzed separately if activities and site conditions that may pollute the stormwater are likely to result in discharges that will significantly vary in the concentration or type of pollutants. Where pollutant types do not vary, the permittee may sample only the discharge point with the highest concentration of pollutants. However, the SWPPP must include documentation on how these determinations were made and in the description of each point of discharge, include the relative quantity (volume) of discharge and pollutants likely to be found.

f. If a sample is taken but one or more of the criteria listed above are not met, the Permittee may submit the sample results but must include an explanation with the monitoring report identifying what criteria were not met and why.

2. Exceptions to Sampling Requirements

a. Facilities that are inactive and unstaffed during an entire quarter must notify EFSEC at the beginning of the inactive period. Sampling will typically not be required during the inactive and unstaffed period but may be required if conditions at the inactive site warrant it. Visual monitoring can only be suspended if authorized in writing by EFSEC.

b. Sampling may be suspended for one or more parameters based on consistent attainment of benchmark values as described below. However, a facility that conducts a significant process change must continue monitoring and may not use previous monitoring to demonstrate consistent attainment. Visual monitoring is not suspended.

3. Monitoring Requirements

a. Visual Monitoring

Visual monitoring shall be done at least quarterly and must include observations made at stormwater sampling locations at the time of sampling. Discharge locations that are not sampled shall receive visual inspection at least annually during a storm event. Visual monitoring includes discharges to ground. Inspection shall include observations for the presence of floating materials, visible sheen, discoloration, turbidity, odor, etc. in the stormwater discharge(s). Visual monitoring shall assess the SWPPP BMPs required by

this permit. The visual inspection shall be conducted by personnel named in the SWPPP to verify that the description of potential pollutant sources required under this permit is accurate; the site map as required in the SWPPP has been updated or otherwise modified to reflect current conditions; and the controls to reduce pollutants in stormwater discharges associated with industrial activity identified in the SWPPP are implemented and adequate. In addition to quarterly visual inspection during storm events, the Permittee shall conduct at least one dry season (July, August, September) inspection each year by personnel named in the SWPPP and after at least seven (7) consecutive days of no precipitation. The dry season inspection shall determine the presence of nonstormwater discharges such as domestic wastewater, noncontact cooling water, or process wastewater (including leachate) to the stormwater drainage system that are not authorized under this permit. It does not include inflow of ground water. If a nonstormwater discharge is discovered, the Permittee shall notify EFSEC. The Permittee shall eliminate the illicit discharge within thirty (30) days unless additional time is authorized in writing by EFSEC.

b. Stormwater Sampling

Stormwater shall be sampled for the parameters listed in the following table. At the end of two years, the Permittee may petition EFSEC to reduce the monitoring frequency for these parameters based on consistent attainment of benchmark values. Consistent attainment is defined as eight consecutive quarters (any quarter with no stormwater discharge is not counted) where the reported values are equal to or less than the benchmark values. Benchmark values are not water quality standards and are not permit limits. They are indicator values. Values at or below benchmark are considered unlikely to cause a water quality violation. For pH equal to or less than the benchmark values means that the pH did not exceed 8.5 and was not less than 6**.**

The listed test methods are the EPA standard methods considered appropriate for the required test. Equivalent or superior test methods may be substituted by an accredited lab. All meters used onsite for sample analysis must be operated in accordance with the manufacturers' requirements and properly calibrated.

Table 7: Monitoring Stormwater Discharges

Parameter	**Units**	**Benchmark Value**	**Minimum Sampling Frequency**
Total Dissolved Solids	mg/L	500 mg/L	Quarterly
Total Zinc	mg/L	117 mg/L	Quarterly
Copper	µg/L	63.6 µg/L	Quarterly
Iron	mg/L	1.0 mg/L	Quarterly
pH	Standard Units	6 – 8.5 SU	Quarterly
BETX[1]	µg/L	1.0 µg/L	Quarterly
Petroleum Oil and Grease	mg/L	15 mg/L	Quarterly

1 Benzene, ethylbenzene, toluene, and total xylenes (BETX) are quantified as benzene.

Discharge of stormwater runoff at the approximate location described on the cover sheet shall not cause a violation of the groundwater standards (Chapter 173-200 WAC). Existing and future beneficial uses of groundwater shall be protected.

E. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored discharge, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (American Public Health Association), unless otherwise specified in this permit or approved in writing by the Council.

F. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall conform with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records shall be maintained for at least three years.

G. Laboratory Accreditation

All monitoring data required by the Council shall be prepared by a laboratory registered or accredited under the provisions of *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Council shall constitute a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results for wastewater discharges (conditions S2.A, S2.B, and S2.C) shall be submitted monthly. Monitoring results obtained during the previous month shall be summarized and reported in a Discharge Monitoring Report (DMR) (EPA 3320 - 1) postmarked no later than the 15th day after the end of the month. DMRs must be submitted monthly whether or not the facility is discharging. If there is no discharge during a given month, the form should be submitted with the words "no discharge" entered in place of the monitoring results.

Monitoring results for stormwater discharges (condition S2.D) shall be submitted quarterly. If there is no discharge during the entire quarter, the Permittee must submit a report stating that no discharge occurred. If the Permittee was not required to conduct sampling and analysis based on consistent attainment of benchmark values, the Permittee must submit a report stating that sampling was not required based on consistent attainment. The quarters are defined as:

First Quarter: January, February, March
Second Quarter: April, May, June
Third Quarter: July, August, September
Fourth Quarter: October, November, December

Priority pollutant analysis data shall be submitted no later than 45 days after the monitoring period. Unless otherwise specified, all toxicity test data shall be submitted within 60 days after the sample date. Duplicate signed copies of the DMRs shall be submitted to the Council and the Department of Ecology at the following addresses:

Energy Facility Site Evaluation Council
P.O. Box 43172
Olympia, WA 98504-3172

Department of Ecology
Southwest Regional Office
Attn: Industrial Unit
P.O. Box 47775
Olympia, WA 98504-7775

All laboratory reports providing data for organic and metal parameters shall include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/number, method detection limit (MDL), laboratory practical quantitation limit (PQL), reporting units, and detected concentration.

B. Recording of Results

For each measurement or sample taken, the permittee shall record the following information: (1) date, exact place, method, and time of sampling or measurement; (2) individual who performed the sampling or measurement; (3) dates the analyses were performed; (4) individual who performed the analyses; (5) analytical techniques or methods used; and (6) results of all analyses.

C. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit using test procedures specified by condition S2 of this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the permittee's DMR.

D. Records Retention

The permittee shall retain all records of monitoring activities and results, including all reports of recordings from continuous monitoring instrumentation, for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or when requested by the Council.

E. Noncompliance Notification

The following occurrences of noncompliance shall be orally reported to the Council within 24 hours from the time the permittee becomes aware of the circumstances:

- Any noncompliance that may endanger health or the environment,
- Any upset or unanticipated bypass that exceeds any effluent limitation in this permit, or
- Any violation of a maximum daily discharge limitation for pollutants listed in condition S1.

A written report also will be submitted to the Council within five business days of the time the permittee becomes aware of the circumstances. The written report shall contain the following information:

- A description of the nature and cause of noncompliance, including the quantity and quality of any unauthorized waste discharges,
- The period of noncompliance, including exact dates and times and/or the anticipated time when the permittee will return to compliance, and
- The steps taken, or to be taken, to reduce, eliminate, and prevent recurrence of the noncompliance.

The Council may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

Instances of noncompliance that do not have to be reported within 24 hours shall be reported in the DMRs (condition S3.A). The reports shall contain all applicable information listed above.

F. Signatory Requirements

All applications, reports, or information submitted to the Council shall be signed and certified.

1. All permit applications shall be signed by either a responsible corporate officer of at least the level of vice president of a corporation, a general partner of a partnership, or the proprietor of a sole proprietorship.

2. All reports required by this permit and other information requested by the Council shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
   A. The authorization is made in writing by a person described above and submitted to the Council.
   B. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may be either a named individual or any individual occupying a named position.)

3. If an authorization under 2.B is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph 2.B above must be submitted to the Council before or together with any reports, information, or applications to be signed by an authorized representative.

4. Any person signing a document under this section shall make the following certification:

   "I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

S4. OPERATION AND MAINTENANCE

The permittee shall, at all times, properly operate and maintain, or cause to be properly operated and maintained, all facilities or systems of treatment and control (and related appurtenances) that are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

The permittee shall prepare, or cause to be prepared, an Operations and Maintenance (O&M) Manual in accordance with WAC 173-240-150 that includes maintenance procedures for Pond C-1 and submit it to the Council for approval within thirty (30) days of the permit effective date. The permittee will update the O&M Manual ninety (90) days prior to commercial operation to include:

- Emergency procedures for plant shutdown and cleanup in the event of wastewater system upset or failure,
- Plant maintenance procedures, and
- Maintenance procedures for Outfall 001.

The permittee shall review the O&M Manual at least annually and send a letter to the Council confirming this review. Substantial changes or updates to the O&M Manual shall be submitted to the Council whenever they are incorporated into the manual.

The approved O&M Manual shall be kept available at the permitted facility and all operators shall follow the instructions and procedures of this manual.

S5. SOLID WASTE DISPOSAL

A. Residual Solids Handling

The permittee shall handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

B. Leachate

The permittee shall not allow leachate from its solid waste material to enter state waters without providing all known, available, and reasonable methods of treatment, and shall not allow such leachate to cause violations of the State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC. The permittee shall apply for a permit modification as may be required for such discharges to state ground or surface waters.

C. Solid Waste Control Plan

The permittee shall have a Solid Waste Control Plan. This plan shall address all solid wastes with the exception of those regulated by Chapters 463-40 and 173-303 WAC (Dangerous Wastes). The plan shall include a general description and the composition, source, generation rate, frequency, and disposal methods of these solid wastes. This plan shall be consistent with Chapter 173-304 WAC and any approved local solid waste management plan. The permittee shall comply with the plan as approved by the Council. The permittee shall submit an update of the solid waste control plan with an application for permit renewal. This permit condition is based on state law, not federal NPDES program regulations.

D. Sanitary Wastes

Sanitary wastes for the Combustion Turbine Project site shall be treated in a septic tank system and discharged to a drainfield located at the project site. Waste treatment and discharges to a drainfield shall be in accordance with the system's operating capacity. All sewage effluent discharges shall meet current state regulatory standards in 248-90 WAC or 173-216 WAC and the conditions issued by Grays Harbor County in its June 13, 2002 approval of the sanitary waste facility design.

S6. SPILL PLAN

A. Spill Prevention, Control, and Countermeasure Plan and Hazardous Waste Management Procedure

The Satsop Spill Prevention, Control, and Countermeasure (SPCC) Plan and Hazardous Waste Management procedure were approved by Council Resolution No. 237. The plans were last updated in August 2001, and approved by EFSEC on September 19, 2001 for construction-related activities. An operational SPCC plan must be prepared and reviewed by the Council prior to operation of the project.

The SPCC Plan provides for the prevention, containment, and control of spills or unplanned discharges of: (1) petroleum (oil), (2) hazardous substances covered by 40 CFR Part 302, and (3) materials that when spilled or otherwise released into the environment are designated Dangerous Waste or Extremely Hazardous Waste by the procedures set forth in WAC 173-303-070. The SPCC Plan includes the following elements:

- A description of the reporting system that will be used to alert responsible managers and legal authorities in the event of a spill.
- A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) intended to prevent, contain, or treat spills of these materials.
- A list of all oil and chemicals used, processed, or stored at the facility, which may potentially be spilled into state waters.

B. Plan Updates

The SPCC Plan shall be updated and submitted to the Council every two years. The plan and any supplements shall be followed throughout the term of the permit.

S7. SAMPLING FOR POLLUTANTS OF CONCERN

A. Priority Pollutant Scan

The permittee shall take a composite sample of the discharge to Outfall 001 and conduct a priority pollutant scan to determine the characteristics of the discharge water and report the results to the Council within 180 days of initiation of commercial operation of the Combustion Turbine Project. The results of the sampling shall be summarized and reported in a DMR (EPA 3320-1).

B. Future Monitoring Requirements

The Council will review the sample results to determine if additional testing or monitoring is required.

The Council, working with the permittee, will take the necessary measures to identify effluent characteristics to ensure discharges are consistent with water quality standards and the conditions of this permit.

S8. STORMWATER POLLUTION PREVENTION PLAN

A. General Requirements

Within sixty (60) days of the effective date of this permit, the permittee shall develop, implement, and comply with a Stormwater Pollution Prevention Plan (SWPPP). The Council will review and approve the SWPPP prior to implementation. The permittee shall implement all elements of the SWPPP including operational, treatment, and source-control best management practices (BMPs), as well as erosion and sediment control BMPs as necessary.

B. Modifications

The permittee shall modify the plans whenever there is a change in design, construction, operation, or maintenance that causes the plans to be less effective in controlling the pollutants. Whenever the description of potential pollutant sources or the pollution prevention measures and controls identified in the plans are inadequate, the plans shall be modified, as appropriate, and submitted to the Council at least thirty (30) days in advance of implementing the proposed changes. The permittee shall implement any modifications to the SWPPP in a timely manner.

The permittee shall periodically review the plans against the guidance provided in *Stormwater Management Manual for Western Washington* (August 2001, Publication No. 99-11 through 99-

15 or as revised) and make modifications as necessary to the plans to comply with current requirements for BMPs).

S9. OUTFALL EVALUATION

At least 180 days before commercial operation of the Combustion Turbine Project begins, the permittee shall provide the engineering design basis of the proposed replacement diffuser assembly.

The permittee shall field test the performance of the new diffuser assembly. The purpose of the field test is to demonstrate that the replacement diffuser assembly and conveyance piping to Outfall 001 are capable of sustained operation.

Before the field test, an implementation plan will be developed. After the field test, the results will be documented in a report. The permittee will keep the Council informed of schedule, progress of documents, and field testing. All three documents: the engineering design basis, the field test implementation plan, and the field test report, must comply with the requirements of the Hydraulic Project Approval issued for work on the diffuser unit on August 15, 2002 and are subject to review and approval by the Council prior to commercial operation. No discharge will be permitted to Outfall 001 prior to approval under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act from the Corps of Engineers, and a Section 401 of the CWA Water Quality Certification from Ecology.

Minimum requirements for the engineering design basis and the implementation plan are provided below.

A. Engineering Design Basis

The engineering design basis will verify that the proposed new multi-port diffuser assembly was designed adequately following current guidelines in Ecology Publication 98-37, *Criteria for Sewerage Works Design.* The design basis will verify the following:

- For each of the diffuser ports, minimum flow speeds in the 2 to 3 feet per second (fps) range will be achieved for peak flows to scour any material that has settled during low flows.
- Maximum port velocities should rarely exceed 15 fps.
- Across-port flow variations should be no more than 20% under the normal diffuser operating range.

The above required information was not provided in the July 26, 2002, Joint Aquatic Resource Permit Application. Hydraulic analysis of multi-port diffusers may be performed using the process developed in *Diffusers for Disposal of Sewage in Sea Water* (Rawn, A.M., et al., American Society of Civil Engineers, March 1960).

B. Implementation Plan

The permittee will develop a plan to conduct the incremental field test by using the following guidelines:

- Flow will be increased incrementally by at least five steps until maximum design flow rates are achieved.
- Each step will last at least 24 hours.
- Field test will be conducted during a time frame of October 1 through May 1.

S10. POND C-1 EVALUATION

Within thirty (30) days of the effective date of the permit, the permittee shall provide an engineering evaluation for Pond C-1 to ensure that the pond is capable of meeting current state stormwater guidelines (Washington State Department of Ecology, Stormwater Management Manual for Western Washington, Publication Numbers 99-11 through 99-15, August 2001). The evaluation will be documented in a report that the Council will review and approve. The Council will coordinate review and approval with the Washington Department of Fish and Wildlife. Any deficiencies found in the pond and pretreatment structures must be corrected prior to any discharge (to the pond). The pond and pretreatment structures will be subject to inspection. The permittee will perform the evaluation to satisfy requirements that include the following:

- Incorporate an oil/water separator with a flow measurement structure such as a flume that is upstream of the pond.
- Verify that the selected BMP for evaluation is appropriate, either as an infiltration basin with a pretreatment basin or the basic treatment BMPs, or as an enhanced treatment facility BMP.
- After selecting the BMP, determine if Pond C-1 meets the corresponding design guidelines for treatment.
- Re-perform the topographic survey.
- Verify that the capacity of the pond and associated structures are designed for a 100-year event based on the completed construction conditions and the current hydrological model for the Lower Chehalis watershed. Runoff should also be considered for the total area that flows to Pond C-1 and not the just the 22-acre Combustion Turbine Project site.
- Verify that the features have structural integrity such as the berm and constructed overflow.
- Perform a minimum of three percolation tests in the floor of the pond to verify that the infiltration rate is sufficient.
- Summarize any deficiencies of the pond and, if found, present design criteria for bringing the pond into compliance.
- Provide long-term maintenance schedules and/or criteria that ensure the pond meets long-term BMP requirements.

S11. PROCESS WATER EVALUATION

Within 120 days of permit issuance, the permittee shall provide for review by Ecology and Fish and Wildlife, and review and approval by the Council, an engineering evaluation of the process water to determine if treatment of parameters to include specific metals (not limited to mercury, cadmium, copper, selenium, zinc, and lead) in the cooling water blowdown wastewater stream is required before discharge to Outfall 001. Included in the engineering evaluation are all compounds such as the biocide used for pretreating the Ranney Well water prior to use in the process, the neutralization compounds, and a detailed process flow diagram. The Council must review and approve the evaluation report. Because exceedances will not be allowed, a treatment plan must be submitted to the Council for review and approval if the Council-approved evaluation report concludes that there is a potential for exceedances to occur. Adequate treatment must be in place before operation to ensure no exceedances occur in the discharge.

S12. RECEIVING WATER STUDY

A. Sampling and Quality Assurance Plan

The permittee shall collect receiving water information necessary to determine if the effluent has a reasonable potential to violate the water quality standards. If reasonable potential exists, the Council will use this information to calculate effluent limits. All sampling and analysis shall be conducted in accordance with the guidelines given in *Guidelines and Specifications for Preparing Quality Assurance Project Plans*, Ecology Publication 91-16. The permittee shall submit a sampling and quality assurance plan for the Council's review and approval within 180 days of the effective date of this permit.

B. Receiving Water Study Plan and Report

Within 180 days of the effective date of this permit, the permittee shall develop a plan for analyzing the Chehalis River within the Lower Chehalis River watershed. This plan should include information such as:

- Parameter to be analyzed including detection levels (At a minimum, the plan should include total suspended solids, ammonia, hardness, dissolved oxygen, biochemical oxygen demand, temperature, pH, salinity, mercury, and arsenic. The following metals should be analyzed for both total recoverable and dissolved: zinc, copper, lead, silver, cadmium, nickel, selenium, and chromium.)
- The time of sampling (At a minimum, sampling should be as close as possible to the time of critical period.)
- Sampling techniques should be identified (per *Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*, EPA Publication No. 821-R-95-034, April 1995).
- Number and location of sampling stations (The receiving water sampling location should be outside the zone of influence of the effluent and should include both upstream and downstream stations.)

The plan shall be submitted to the Department of Ecology and to the Council for review and approval prior to implementation.

Within one year of the effective date of this permit, the permittee shall sample and analyze the receiving water for the approved Receiving Water Study Plan. The permittee will develop a report of this analysis within ninety (90) days of completing the receiving water study and submit it to both the Department of Ecology and the Council.

C. Effluent Study

After the Combustion Turbine Project has been in operation for one year, the permittee shall submit an effluent study to the Council that analyses the wastewater discharge for total suspended solids, dissolved oxygen, biochemical oxygen demand, hardness, temperature, pH, salinity, mercury, ammonia, and arsenic. The following metals shall be analyzed for both total recoverable and dissolved: zinc, copper, lead, silver, cadmium, nickel, selenium, and chromium.

For those parameters listed in the S2.A monitoring schedule, effluent monitoring will be consistent with S2.A. A sampling plan for parameters not listed in S2.A, shall be developed and submitted to the Council before commercial operation of the Combustion Turbine Project begins.

The effluent study shall include a component that monitors and assesses the effect of waste water discharges during operation of the Satsop Generating Facility on the Chehalis River.

All analysis for metals must use the methods given in 40 CFR Part 136 and be reported as total recoverable. The permittee should use the clean sampling guidance to collect metals samples. Effluent samples shall be collected as 24-hour composite samples. The detection levels used for the analysis must be:

Table 8: Detection Levels

Pollutant Parameter	Detection Limit Required
Copper	1.0 µg/L
Lead	1.0 µg/L
Nickel	1.0 µg/L
Chromium	1.0 µg/L
Zinc	2.0 µg/L
Cadmium	0.1 µg/L
Selenium	2.0 µg/L
Silver	0.2 µg/L
Mercury	0.2 µg/L
Arsenic	1.0 µg/L

The permittee will develop a report of this analysis within ninety (90) days of completing the effluent study and submit it to both the Department of Ecology and the Council.

D. Temperature Study

After the Combustion Turbine Project has been in operation for one year, the permittee shall submit a report to the Council that analyzes the monitored temperature data of the effluent. This report should include information such as:

- Effectiveness of using quench water for cooling the effluent to 16.0°C.
- The ultimate temperature of the discharge using quench water.
- How the heat exchange unit is used with and without quench water. Demonstrate if the heat exchange unit is more efficient in lowering the temperature of the effluent to 16.0°C rather than using quench water. Describe the process details and operation of the heat exchange unit.

The permittee will develop a report of this analysis within ninety (90) days of completing the temperature/quench water study and submit it to the Council.

E. Future Monitoring Requirements

The Council will review and approve the studies outlined under this special condition to determine future testing or monitoring requirements.

The Council and Ecology, working with the permittee, will take the necessary measures to identify effluent characteristics to ensure discharges are consistent with water quality standards and the conditions of this permit.

S13. WHOLE EFFLUENT TOXICITY

The Water Quality Standards for Surface Waters require that the effluent not have toxic effects on the receiving waters. Many toxic pollutants cannot be detected using commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the wastewater in laboratory tests and measuring the organisms' response. Toxicity tests measure the aggregate toxicity of the whole effluent; therefore, this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and others measure chronic toxicity.

S14. ACUTE TOXICITY

A. Effluent Characterization

The permittee shall conduct acute toxicity testing on the final effluent to determine the presence and amount of acute (lethal) toxicity. All of the acute toxicity tests listed below shall be conducted on each sample taken for effluent characterization. Effluent characterization for acute toxicity shall be conducted quarterly for one year. Acute toxicity testing shall follow protocols, monitoring requirements, and quality assurance/quality control procedures specified in this

section. The permittee may perform acute toxicity effluent screening during effluent characterization using only 100% effluent and a control. If any effluent screening test has less than 80% survival in 100% effluent, the permittee shall resample immediately and conduct another acute toxicity test using a dilution series consisting of a minimum of five concentrations and a control to estimate the concentration lethal to 50% of the organisms (LC_{50}). The percentage of survival in 100% effluent shall also be reported from tests with a series of concentrations.

Testing shall begin within 60 days of initial commercial operation. A written report shall be submitted to the Council within 60 days after each of the test results are final. A final effluent characterization summary report shall be submitted to EFSEC within 90 days after the last monitoring test results are final. This summary report shall include a tabulated summary of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability that is developed during the period of testing.

Acute toxicity tests shall be conducted with the following species and protocols:

- Fathead minnow, *Pimephales promelas* (96-hour static-renewal test, method: EPA/600/4-90/027F).
- Daphnid, *Ceriodaphnia dubia, Daphnia pulex,* or *Daphnia magna* (48-hour static test, method: EPA/600/4-90/027F). The permittee shall choose one of the three species and use it consistently throughout effluent characterization.
- Rainbow trout, *Oncorhynchus* mykiss (96-hour static-renewal test, method: EPA/600/4-90/027F).

The permittee shall also conduct the rapid screening test listed in subsection E, below, on each sample during effluent characterization. The rapid screening test result shall be reported with the results of the acute toxicity tests conducted on that sample to provide a correlation.

B. Effluent Limit for Acute Toxicity

The permittee has an effluent limit for acute toxicity if, after completing one year of effluent characterization, either:

- The median survival of any species in 100% effluent is below 80%, or
- Any one test of any species exhibits less than 65% survival in 100% effluent.

The effluent limit for acute toxicity is no acute toxicity in a test concentration representing the acute critical effluent concentration (ACEC). The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the zone of acute criteria exceedance assigned pursuant to WAC 173-201A-100.

If the permittee has an effluent limit for acute toxicity and the ACEC is not known, effluent characterization for acute toxicity shall continue until the time an ACEC is known. Toxicity testing conducted during an effluent characterization that extends beyond one year until an

ACEC has been determined shall be performed using each one of the tests listed in subsection A above on a rotating basis. When an ACEC has been determined, the permittee shall immediately complete all applicable requirements in subsections C, D, and F.

If no effluent limit is required at the end of one year of effluent characterization, the permittee shall stop effluent characterization and conduct the activities in subsection E even if the ACEC is unknown.

C. Monitoring for Compliance with an Effluent Limit for Acute Toxicity

Monitoring to determine compliance with the effluent limit shall be conducted quarterly for the remainder of the permit term using, on a rotating basis, each of the species listed in subsection A. Monitoring shall be performed using 100% effluent, the ACEC, and a control. The permittee shall schedule the toxicity tests in the order listed in the permit unless EFSEC notifies the permittee in writing of another species rotation schedule. The percentage of survival in 100% effluent shall be reported for all compliance monitoring.

Compliance with the effluent limit for acute toxicity means no statistically significant difference in survival between the control and the test concentration representing the ACEC. The permittee shall immediately implement subsection D if any acute toxicity test conducted for compliance monitoring determines a statistically significant difference in survival rates between the control and the ACEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10%, the hypothesis test shall be conducted at the 0.01 level of significance.

D. Response to Noncompliance with an Effluent Limit for Acute Toxicity

If the permittee violates the acute toxicity limit in subsection B, the permittee shall begin additional compliance monitoring within one week of receiving the test results. This additional monitoring shall be conducted weekly for four consecutive weeks using the same test and species as the failed compliance test. Testing shall determine the LC_{50} and effluent limit compliance. The discharger shall return to the original monitoring frequency in subsection C after completion of the additional compliance monitoring.

If the permittee believes that a test indicating noncompliance will be identified by EFSEC as an anomalous test result, the permittee may notify EFSEC that only one additional sample for toxicity testing will be taken and the permittee will wait for notification from EFSEC before completing the additional monitoring required in this subsection. The notification to EFSEC shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by EFSEC that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for acute toxicity, the permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by EFSEC that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to EFSEC on possible causes and preventive measures for the transient toxicity event that triggered the additional compliance monitoring.

If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to EFSEC within 60 days after test results are final. The TI/RE plan shall be based on 173-205-100(2) WAC. The TI/RE plan shall address areas where adequate guidance, procedures, or protocols are not available for implementation of the plan. The permittee shall submit a revised TI/RE plan, in accordance with EFSEC comments, within 30 days after receipt of EFSEC comments.

E. Monitoring When There is No Permit Limit for Acute Toxicity

The permittee shall test final effluent once in the summer and once in the winter immediately before the application for permit renewal is submitted. All species used in the initial acute effluent characterization or substitutes approved by EFSEC shall be used and results submitted to EFSEC as a part of the permit renewal application process.

In consideration of the permittee's potential to have toxicity occur and cause receiving water impacts, the following monitoring is required. The permittee shall conduct 24-hour acute rapid screening tests using:

1. *Brachionus sp.* (ASTM E 1440-91).
2. Fathead minnow (*Pimephales promelas*) and a Daphnid *(Ceriodaphnia dubia, Daphnia pulex,* or *Daphnia magna)* on an alternating schedule (24-hour static test, method: EPA/600/4-90/027F).

A minimum of 40 organisms shall be used in both the control and 100% effluent. Tests shall have a maximum acceptable mortality rate of 0.20 in 100% effluent. The mortality rate is determined by WAC 173-205-120(2)(b).

When a rapid screening test results in a mortality rate greater than 0.20, the permittee shall retest with all species and durations used in the acute effluent characterization in subsection A and actively investigate the source of toxicity. The toxicity test and investigation results shall be reported to the EFSEC within 30 days of the rapid screening test failure.

F. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Council's database, the permittee shall send the disk to the Council along with the test report, bench sheets, and reference toxicant results.
2. Testing shall be conducted on 24-hour composite effluent samples. Composite samples taken for toxicity testing shall be cooled to 4°C while being collected and shall be sent to the lab immediately upon completion. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one hour after collection, it must have a temperature below 20°C at receipt. If a grab sample is received at the testing lab within four hours after collection, it must be below 12°C at receipt. All other samples must be below 8°C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended. The lab shall store all samples at 4°C in the dark from receipt until completion of the test.
3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version.
4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A and the Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If the Council determines the test results are invalid or anomalous, testing shall be repeated with freshly collected effluent.
5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.
6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.

S15. CHRONIC TOXICITY

A. Effluent Characterization

The permittee shall conduct chronic toxicity testing on the final effluent. The chronic toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Testing shall begin within 60 days of initial commercial operation. A written report shall be submitted to the Council within sixty (60) days after each test is final. A final effluent characterization summary report shall be submitted to the Council within ninety (90) days after the last monitoring test results are final. This summary report shall include a tabulated summary of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability that is developed during the period of testing.

Effluent testing for chronic toxicity shall be conducted biannually for one year. The permittee shall conduct chronic toxicity testing during effluent characterization on serial dilutions of effluent to determine the IC_{50} or EC_{50}. This series of dilutions shall include the ACEC. The permittee shall compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

Chronic toxicity tests shall be conducted with the following species and the most recent version of the following protocols:

- Fathead minnow, *Pimephales promelas* (EPA/600/4-89/001)
- Water flea, *Ceriodaphnia dubia* (EPA/600/4-89/001)
- Alga, *Selenastrum capricornutum* (EPA/600/4-89/001)

The permittee shall also conduct the rapid screening test listed in subsection E, below, on each sample during effluent characterization. The rapid screening test result shall be reported with the results of the chronic toxicity tests conducted on that sample to provide a correlation.

B. Effluent Limit for Chronic Toxicity

After completing effluent characterization, the permittee has an effluent limit for chronic toxicity if any test conducted for effluent characterization shows a significant difference between the control and the ACEC at the 0.05 level of significance using hypothesis testing (Appendix H, EPA/600/4-89/001). In this event, the permittee shall complete all applicable requirements in subsections C and D below. If no significant difference is shown between the ACEC and the control in any of the chronic toxicity tests, the permittee has no effluent limit for chronic toxicity and only subsection E applies.

The effluent limit for chronic toxicity is no toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC). CCEC means the maximum concentration of effluent allowable at the boundary of a mixing zone assigned pursuant to WAC 173-201A-100.

C. Monitoring Compliance with an Effluent Limit for Chronic Toxicity

Monitoring to determine compliance with the effluent limit shall be conducted biannually for the remainder of the permit term using, on a rotating basis, each of the species listed in subsection A. Monitoring shall be performed using the CCEC, the ACEC, and a control. The permittee shall schedule the toxicity tests in the order listed in the permit unless EFSEC notifies the permittee in writing of another species rotation schedule.

Compliance with the effluent limit for chronic toxicity means no statistically significant difference in response between the control and the test concentration representing the CCEC. The permittee shall immediately implement subsection D if any chronic toxicity test conducted for compliance monitoring determines a statistically significant difference in response between the control and the CCEC using hypothesis testing at the 0.05 level of significance (Appendix H,

EPA/600/4-89/001). If the difference in response between the control and the CCEC is less than 20%, the hypothesis test shall be conducted at the 0.01 level of significance.

To establish whether the chronic toxicity limit is eligible for removal from future permits, the permittee shall also conduct this same hypothesis test (Appendix H, EPA/600/4-89/001) to determine if a statistically significant difference in response exists between the ACEC and the control.

D. Response to Noncompliance with an Effluent Limit for Chronic Toxicity

If a toxicity test conducted for compliance monitoring under subsection C determines a statistically significant difference in response between the CCEC and the control, the permittee shall begin additional compliance monitoring within one week of receiving the test results. This additional monitoring shall be conducted monthly for three consecutive months using the same test and species as the failed compliance test. Testing shall determine the IC50 or EC50 and effluent limit compliance. The discharger shall return to the original monitoring frequency in subsection C after completion of the additional compliance monitoring.

If the permittee believes that a test indicating noncompliance will be identified by EFSEC as an anomalous test result, the permittee may notify EFSEC that only one additional sample for toxicity testing will be taken and the permittee will wait for notification from EFSEC before completing the additional monitoring required in this subsection. The notification to EFSEC shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by EFSEC that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for chronic toxicity, the permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by EFSEC that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to EFSEC on possible causes and preventive measures for the transient toxicity event that triggered the additional compliance monitoring.

If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the permittee shall submit a TI/RE plan to EFSEC within 60 days after test results are final. The TI/RE plan shall be based on 173-205-100(2) WAC. The TI/RE plan shall address areas where adequate guidance, procedures, or protocols are not available for implementation of the plan. The permittee shall submit a revised TI/RE plan, in accordance with EFSEC comments, within 30 days after receipt of EFSEC comments.

E. Monitoring When There is No Permit Limit for Chronic Toxicity

The permittee shall test final effluent once in the summer and once in the winter immediately before the application for permit renewal is submitted. All species used in the initial chronic effluent characterization or substitutes approved by EFSEC shall be used and results submitted to EFSEC as a part of the permit renewal application process.

The permittee shall conduct chronic rapid screening tests using:

1. Bacterial bioluminescence test (Microtox or approved alternate).
2. Rotifer life cycle test (Snell, Terry W. 1992. A 2-D Life Cycle Test With The Rotifer *Brachionus calyciflorus* Environ. Toxicol. Chem. 11: 1249-1257).

Tests shall be expected to have no statistically significant difference in response between the ACEC and the control using the method in Appendix H of EPA/600/4-89/001 or an equivalent method approved by EFSEC. Whenever a rapid screening test result has a statistically significant difference in response between the ACEC and the control, the permittee shall retest with all species and durations used in the chronic effluent characterization in subsection A and actively investigate the source of toxicity. The chronic toxicity test and investigation results shall be reported to EFSEC within 30 days of the rapid screening test failure.

F. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Council's database, the permittee shall send the disk to the Council along with the test report, bench sheets, and reference toxicant results.
2. Testing shall be conducted on 24-hour composite effluent samples. Composite samples taken for toxicity testing shall be cooled to 4°C while being collected and shall be sent to the lab immediately upon completion. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one hour after collection, it must have a temperature below 20°C at receipt. If a grab sample is received at the testing lab within four hours after collection, it must be below 12°C at receipt. All other samples must be below 8°C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended. The lab shall store all samples at 4°C in the dark from receipt until completion of the test.
3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version.
4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A and the Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test*

Review Criteria. If the Council determines the test results are invalid or anomalous, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.
6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.

S16. PERMIT REOPENER

EFSEC may reopen this permit on the basis of monitoring results or other causes consistent with state and federal regulations and/or to modify or establish specific monitoring requirements, effluent limitations, or other conditions in the permit.

Use of stored water as process water is not currently permitted. Proposed use of stored water would be grounds for EFSEC to reopen the permit for review.

GENERAL CONDITIONS

G1. DUTY TO PROVIDE INFORMATION

The permittee shall submit to the Council, within a reasonable time, all information that the Council may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also submit to the Council upon request copies of records required to be kept by this permit (40 CFR 122.41[h]).

G2. DUTY TO COMPLY

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G3. DISCHARGE VIOLATIONS OR TAMPERING

Violations of conditions of this permit are subject to enforcement actions and penalties as provided for in Chapter 80.50 RCW. Except as provided in permit conditions G6, Upset, and G7, Bypass Prohibited, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

Penalties for Violating Permit Conditions

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to $10,000 and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to $10,000 for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

Penalties for Tampering

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this condition, punishment shall be a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or by both.

G4. REDUCED PRODUCTION FOR COMPLIANCE

The permittee, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G5. UPSET

According to 40 CFR 122.41(n), an upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that: (1) an upset occurred and that the permittee can identify the cause(s) of the upset; (2) the permitted facility was being properly operated at the time of the upset; (3) the permittee submitted notice of the upset as required in condition S3.E; and (4) the permittee complied with any remedial measures required under S5 of this permit.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

G6. BYPASS PROHIBITED

As per 40 CFR 122.4(m), the intentional bypass of wastes from all or any portion of a treatment works is prohibited unless the following four conditions are met:

1. Bypass is: (A) unavoidable to prevent loss of life, personal injury, or severe property damage; or (B) necessary to perform construction or maintenance-related activities essential to meet the requirements of the Clean Water Act and authorized by administrative order.
2. There are no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, maintenance during normal periods of equipment down time, or temporary reduction or termination of production.
3. The permittee submits notice of an unanticipated bypass to the Council in accordance with condition S3.E. Where the permittee knows or should have known in advance of the need for a bypass, this prior notification shall be submitted for approval to the Council, if possible, at least 30 days before the date of bypass (or longer if specified in the special conditions).

4. The bypass is allowed under conditions determined to be necessary by the Council to minimize any adverse effects. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities that would cause them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

After consideration of the factors above and the adverse effects of the proposed bypass, the Council will approve or deny the request. Approval of a request to bypass will be by administrative order under RCW 90.48.120.

G7. RIGHT OF INSPECTION AND ENTRY

The permittee shall allow entry to an authorized representative of the Council, upon the presentation of credentials and such other documents as may be required by law:

1. To enter the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.
2. To have access to and copy—at reasonable times and at reasonable cost—any records required to be kept under the terms and conditions of this permit.
3. To inspect—at reasonable times—any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
4. To sample or monitor—at reasonable times—any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G8. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Council's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

1. The following are causes for terminating this permit during its term, or for denying a permit renewal application:
   a. Violation of any permit term or condition.
   b. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.
   c. A material change in quantity or type of wastewater disposal.
   d. A determination that the permitted activity endangers human health or the environment or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination (40 CFR part 122.64[3]).
   e. A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit (40 CFR part 122.64[4]).
   f. Failure or refusal of the permittee to allow entry as required in RCW 90.48.090.

2. The following are causes for modification but not revocation and reissuance except when the permittee requests or agrees:
   a. A material change in the condition of the waters of the state.
   b. New information not available at the time of permit issuance that would have justified the application of different permit conditions.
   c. Material and substantial alterations or additions to the permitted facility or activities that occurred after this permit issuance.
   d. Promulgation of new or amended standards or regulations having a direct bearing on permit conditions, or requiring permit revision.
   e. The permittee has requested a modification based on other rationale meeting the criteria of 40 CFR Part 122.62.
   f. The Council has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.
   g. Incorporation of an approved local pretreatment program into a municipality's permit.

3. The following are causes for modification or alternatively revocation and reissuance:
   a. Cause exists for termination for reasons listed above in subsection 1, and the Council determines that modification or revocation and reissuance is appropriate.
   b. The Council has received notification of a proposed transfer of the permit.

G9. REPORTING A CAUSE FOR MODIFICATION

A permittee who knows or has reason to believe that any activity has occurred or will occur that would constitute cause for modification or revocation and reissuance under condition G8 must report such plans or information to the Council so that a decision can be made on whether action to modify or revoke and reissue a permit will be required.

The Council may require submission of a new application, or a supplement to the previous application, along with required engineering plans and reports. This application shall be submitted at least 60 days before any proposed changes. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not relieve the permittee of the duty to comply with the existing permit until it is modified or reissued.

G10. REPORTING PLANNED CHANGES

The permittee shall, as soon as possible, give notice to the Council of planned physical alterations or additions to the permitted facility, production increases, or process modification that will result in: (1) the permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b); (2) a significant change in the nature or an increase in quantity of pollutants discharged; or (3) a significant change in the permittee's sludge use or disposal practices. Following such notice, this permit may be modified or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G11. PLAN REVIEW REQUIRED

Before constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to the Council for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications shall be submitted at least 180 days before the planned start of construction unless a shorter time is approved by the Council. Facilities shall be constructed and operated in accordance with the approved plans.

G12. REPORTING ANTICIPATED NONCOMPLIANCE

The permittee shall give advance notice to the Council by submitting a new application or supplement at least 180 days before commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity that may result in noncompliance with permit limits or conditions. Any maintenance of facilities that might interrupt operation and degrade effluent quality shall be scheduled during noncritical water quality periods and carried out in a manner approved by the Council.

G13. REPORTING OTHER INFORMATION

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Council, it shall promptly submit such facts or information.

G14. REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGERS

The permittee belonging to the categories of existing manufacturing, commercial, mining, or silviculture must notify the Council as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
   - 100 micrograms per liter (µg/L).
   - 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and 1 mg/L for antimony.
   - Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
   - The level established by the Council in accordance with 40 CFR 122.44(f).

2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant that is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
   - 500µg/L.
   - 1 mg/L for antimony.

- Ten times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
- The level established by the Council in accordance with 40 CFR 122.44(f).

G15. TRANSFER OF THIS PERMIT

This permit may be transferred by the permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

In the event of any change in control or ownership of facilities from which the authorized discharge emanates, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter with a copy forwarded to the Council.

G16. TOXIC POLLUTANTS

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G17. ADDITIONAL MONITORING

The Council may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G18. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G19. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G20. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit shall be construed as excusing the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G21. PROPERTY RIGHTS

This permit does not convey any property rights of any sort or any exclusive privilege.

G22. DUTY TO REAPPLY

The permittee shall apply for permit renewal at least 180 days before the specified expiration date of this permit.